



Australian Government

Department of Education, Employment and Workplace Relations

RIIBLA602A Establish and maintain a blasting system

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This unit covers establishing and maintaining a blasting system in the coal and metalliferous mining and extractive industries. It includes: identifying and evaluating the criteria; establishing the system, support arrangements and systems for audit and review.

Application of the Unit

This unit is appropriate for those working in management or technical specialist roles, within:

- Coal mining
- Extractive industries
- Metalliferous mining

Licensing/Regulatory Information

Refer to Unit Descriptor.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify and evaluate the criteria	1.1. Access, interpret and apply compliance documentation relevant to establishing and maintaining blasting systems 1.2. Identify blasting methods and options from an analysis of all relevant technical, environmental and operational and financial information 1.3. Identify the requirements for blasting materials against mine requirements 1.4. Identify the requirements for, and purpose of blasting equipment and supporting infrastructure in accordance with mine design and system of mining 1.5. Assess potential sites/routes for blasting and supporting infrastructure by visit, and locate and confirm on mine plan
2. Establish a system for blasting	2.1. Establish procedures to identify hazards and analyse, evaluate and manage risks associated with blasting 2.2. Develop operational procedures for blasting, covering methods, materials, equipment and infrastructure from site and legislative requirements and incorporate into site documentation 2.3. Establish recording and reporting procedures for blasting information 2.4. Develop safe blasting procedures, including design management, for the site to comply with company and statutory/legal requirements 2.5. Establish monitoring procedures for blasting 2.6. Develop and establish procedures for reviewing and modifying work processes 2.7. Develop blasting system as an integral component of the OHS management system of the mine
3. Establish the support arrangements	3.1. Identify and establish appropriate magazine/storage facilities from an analysis of all relevant statutory, technical and management information

	3.2. Identify and establish appropriate transportation and handling methods for explosives from an analysis of all relevant statutory, technical, operational and financial information 3.3. Develop maintenance procedures for blasting equipment and infrastructure systems from statutory and site requirements, and incorporate into site documentation 3.4. Establish a program, including systems and procedures, to satisfy blasting and shotfiring training requirements
4. Establish systems for audit and review	4.1. Establish procedures to evaluate and confirm the blasting system compliance with statutory and site requirements 4.2. Identify and assess future blasting and supporting infrastructure system requirements and incorporate into planning processes 4.3. Establish procedures to confirm the currency and compliance of blasting equipment and infrastructure maintenance and safety standards 4.4. Establish procedures for incorporating feedback into the audit and review process 4.5. Establish procedures to confirm the currency, relevance and compliance of the blasting training program against identified requirements 4.6. Establish procedures for response to instances of non-compliance or other discrepancies/deficiencies revealed by audit 4.7. Audit emergency response and evacuation plans and procedures for compliance with legislative and site requirements

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Specific skills are required to achieve the performance criteria in this unit, particularly for the application in the various circumstances in which this unit may be applied. This includes the ability to carry out the following as required to establish and maintain a blasting system:

- apply legislative, organisation and site requirements and procedures
- access and use mine-site information and recording systems
- apply blasting operations analyse and review techniques
- apply information analysis techniques
- apply brainstorming to collect maximum information
- apply fault-tree or equivalent type of risk analysis
- apply human, financial and physical resource coordinate procedures
- apply delegation of responsibility and tasks
- apply action plans develop procedures
- apply systems and equipment evaluation procedures
- facilitate groups to work together
- apply hazards and assess risk identification procedures
- apply procedures for identifying or establishing mine-site facilities for blasting management
- apply effective decision making
- apply magazines and contents management requirements and procedures
- apply projects and tasks manage procedures
- participate as a team member
- read and interpret mine plans
- apply report write techniques

Required knowledge

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly its application in a variety of circumstances in which the unit may be used. This includes knowledge of the following, as required to establish and maintain a blasting system:

- blast design criteria
- blast monitoring techniques
- blast timings
- blasting operations
- characteristics and applications of blasting products
- charging techniques
- computer applications

- customer/client relations
- delays and their application
- document control systems
- drilling plant and equipment
- environmental management
- explosives disposal procedures
- explosives inventory control requirements
- explosives procurement procedures
- control of explosives
- explosives storage and magazine requirements
- explosives transport and handling requirements
- mine products and services
- misfire management techniques
- negotiation techniques
- quality systems
- risk management: principles, strategies and applications
- safety and health requirements
- statutory requirements and controls
- surveying
- team management techniques

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following: • knowledge of the requirements, procedures and instructions for establishing and maintaining blasting systems • implementation of procedures and techniques for the safe, effective and efficient establishment and maintenance of blasting systems • the identification of the relevant information and scope of the work required to meet the required outcomes • the identification of viable program options and the selection of programs that best meet the required outcomes • working with others to undertake and complete the establishing and maintenance of blasting systems • consistent and timely establishing and maintenance of blasting systems
Context of and specific resources for assessment	• This unit must be assessed in the context of the work environment. Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills. • The assessment environment should not disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those

	required on the job. • Customisation of assessment and delivery environment to sensitively accommodate cultural diversity. • Aboriginal people and other people from a non English speaking background may have second language issues. • Assessment of this competency requires typical resources normally used in a civil works environment. Selection and use of resources for particular worksites may differ due to site circumstances. • Where applicable, physical resources should include equipment modified for people with disabilities. • Access must be provided to appropriate learning and/or assessment support when required.
Method of assessment	This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment methods: • written and/or oral assessment of the candidate's required knowledge • observed, documented and/or first hand testimonial evidence of the candidate's: • implementation of appropriate procedures and techniques for the safe, effective and efficient achievement of the required outcomes • identification of the relevant information and scope of the work required • identification of viable options and the selection of options that best meet the required outcomes • consistently achieving the required outcomes • first hand testimonial and documentary evidence of the candidate's: • working with others to establish and maintain blasting systems • consistent and timely gaining of approval of

	blasting systems • provision of clear, timely required support and advice on the implementation of blasting systems
Guidance information for assessment	Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Relevant compliance documentation may include:	• legislative, organisation and site requirements and procedures • manufacturer's guidelines and specifications • Australian standards • code of practice • Employment and workplace relations legislation • Equal Employment Opportunity and Disability Discrimination legislation
Hazard is:	• a source of potential harm or a situation with a potential to cause loss
Risk is:	• the chance of something happening that will have an impact upon objectives. It is measured in terms of consequences and likelihood
Management is responsible for:	• blasting schedules in compliance and accordance with statutory/legal regulations that are in place • site conditions that may vary and may require differing methods of safe initiation (weather, winds, storms etc) • geological factors influencing blast design, initiation systems and environmental compliance • geographic location of site in relation to neighbours who may be affected by consequence of blast or blast design • alternate explosives types and availability that may affect or influence blast design • delay designs and ignition sources • blasting licences, competencies and permits • laser profiling • bore hole tracking • interpreting and communicating information • pursuing optimum performance in blasting operations • monitoring/videoing blasting practice for safety

	and other considerations • monitoring processes for noise and vibration • processes for minimising fly rock • statutory/legal compliance may include: • Australian Standard • Australian Explosives Manufacturers Safety Committee Code of Good Practice: Precursors for Explosives • Australian Code for the Transport of Explosives by Road & Rail (Australian Explosives Code) • common law • dangerous goods • development of training policies/programs to aid compliance • environmental • explosives • industrial relations • local government • minerals and extractive industry licensing • navigation • planning and assessment • safety and health • trade practices • waterways • weights and measures • workers compensation/WorkCover
Monitoring of activities may include:	• review of written reports • performance appraisal • auditing procedures
Planning processes may include:	• interpreting and communicating information • business/performance plans • location • tender specifications • communication liaison/public relations • resources • statutory/legal/organisational requirements and control • resource parameters • technical standards established by industry and/or enterprise • legal issues/processes

	• planning approvals • surveying • monitoring
Audit is:	• a systematic examination against defined criteria to determine whether activities and related results conform to planned arrangement, and whether these arrangements are implemented effectively and are suitable to achieve the organisation's policy and objectives

Unit Sector(s)

Blasting

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.